CLAIMS

We claim:

1. A method for detecting a difference at target nucleic acid sequence comprising:
   a) providing a nucleic acid target suspected of containing sequence variation in comparison to a control,
   b) transforming the target nucleic acids to the single strand spatial conformers; and
   c) changing the physical conditions during the native separation of said single strand nucleic acids spatial conformers at least one time, resulting in the conformation changes of said conformers so as to detect said sequence variation;

2. The method of claim 1, further comprising step d) comparing said separated single strand conformers from said target nucleic acid with a reference control.

3. The method of claim 2, wherein said changed the physical parameter during the separation influence the total energy of said single strand NA spatial conformers.

4. The method of claim 2, wherein said changed physical parameter during the separation is temperature.

5. The method of claim 2, wherein said changed physical parameter is any combination of parameters like: temperature, pH, ionic strength and the like.

6. The method of claim 1, wherein said nucleic acid target comprise single stranded DNA.

7. The method of claim 1, wherein said nucleic acid target comprise double stranded DNA.

8. The method of claim 1, wherein said nucleic acid target comprise RNA.

9. The method of claim 1, wherein said target nucleic acid contains a fluorescent label.

10. The method of claim 1, wherein said target nucleic acid contains an electromagnetic label.

11. The method of claim 9, wherein said detection of step c) comprise detection of said fluorescent labeled fragments.

12. The method of claim 10, wherein said detection of step c) comprise detection of said electromagnetic labeled fragments.

13. The method of claim 1, wherein said detection of step c) comprise detection of said target nucleic acid with silver staining method.